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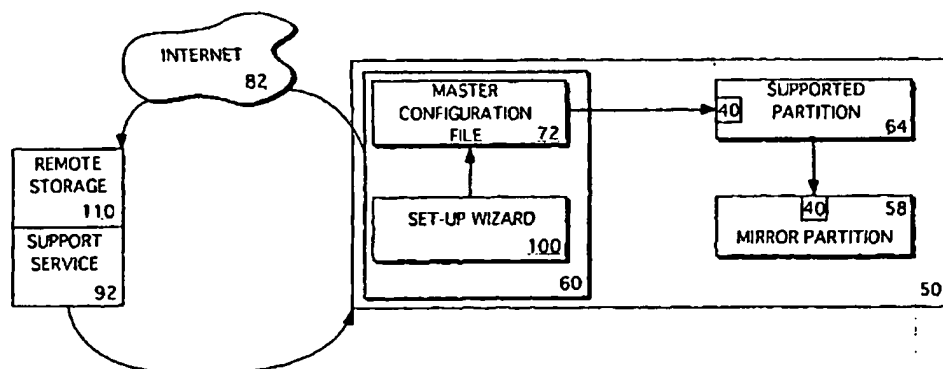
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(54) Title: SET UP WIZARD TO HARVEST MACHINE, NETWORK AND E-MAIL INFORMATION FOR MASTER CONFIGURATION FILE



(57) Abstract: A method for set-up wizard program (100) to configure a computer system (52) and saving the configuration information at a local and a remote storage device (110) to facilitate restoration of configuration settings upon system failure or corruption is disclosed. The configuration information includes user preferences and personal information, network settings and electronic mail configuration information. The method comprising receiving configuration information from a user interface into a computer system, storing the information to a master configuration file (72) to a data storage device at a location remote from the computer system and, configuring the computer system according to the information provided by the user.

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SET UP WIZARD TO HARVEST MACHINE, NETWORK AND E-MAIL INFORMATION FOR MASTER CONFIGURATION FILE

FIELD OF THE INVENTION

The present invention relates to the field of computer system configuration and, more specifically, to a method of storing and restoring configuration information to facilitate maintenance of the integrity and operation of the computer system.

BACKGROUND

With a view to reducing the costs of providing technical support for computer systems and installed software, a number of information technology (IT) support companies presently offer remote diagnostic services, whereby a diagnosis of a faulty or failed computer system is performed remotely. However, such a service may require (1) the installation of a diagnostic agent on the faulty computer system that performs a complex and time consuming diagnosis of the computer system, and (2) the taking of corrective action, which may again be time consuming. Even when completed, the service leaves the computer system, and the user, to re-input any user personal, network or electronic mail configurations lost, wasting both time and expense as each system unit is addressed.

Where a small size business is concerned, some users of computer systems may need to have configuration information input again by a knowledgeable employee, who may need to redundantly edit and re-input configuration information for the users. Even where the users configure their own systems, including network settings and electronic mail settings, the time spent in repeating this operation is nonetheless wasted. Unnecessary down time and decreased performance are practically inevitable wherever a failure occurs which corrupts or obliterates the original configuration settings on a system. Remote service systems can diagnose and repair the failure, but this still leaves a computer system which must be again configured using

information specific to the user, his network and electronic mail settings, including password information.

Even where failure is not total and some of this information remains, the need to supplement lost settings and information still requires delay in both verifying the information from the user and/or inputting the information and settings again, often made more difficult where a user does not remember or has changed his/her original configuration information. Such situation yields to further cost and delay, and not necessarily from lack of trained support personnel, but from the time it takes to glean the necessary information from the user or their supervisor or technical contact. For the home user, for whom technical support may not be readily available, the difficulties can be compounded.

The fact that on many operating systems such configuration information is dispersed throughout the system. Reintroducing this information upon either system failure or where an update or change simply must be made often requires some expertise as well as understanding of registry editing functions. Centralizing such information so as to allow for ease of access if changes are necessary would benefit most users and allow for more simplified remote or local backup procedures.

SUMMARY

According to the present invention, there is provided a method of configuring a storage device accessible by a computer system by using a set-up wizard program. Upon receipt of a computer system by a user, executing the set-up wizard harvests configuration information pertaining to the machine, personal preferences and information of the user, network settings as well as electronic mail configuration information. Configuration information harvested by the set-up wizard through a computer interface is used to configure various applications within the system including a registry located within a first supported partition of the computer system. A persistent copy of the first supported partition, including any registry information is stored

within a second mirror partition on the system. The first supported partition is also stored as a back-up at a storage device at a remote location, in one embodiment this is accessible over the Internet.

The configuration information is also stored to a master configuration file on the computer system. The master configuration file is also stored as a back-up at a storage device at a remote location. Upon system failure or corruption of configuration information, the master configuration file, whether the local or the remote file, can be used to reconfigure the computer system for the user. The master configuration file may be accessed by the user to change or modify configuration information, in one embodiment the master configuration file includes a registry editor allowing the user to access and change registry information contained in the first partition. In another embodiment, the master configuration file can also contain configuration information for peripherals or software added to the computer system by the user; this information may also be received by re-executing the set-up wizard program or another program.

Other features and advantages of the invention will be apparent from the accompanying drawings and from the detailed description that follows below.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is illustrated by way of example and not by way of limitation in the figures of the accompanying drawings in which like references indicate similar elements and in which:

Figure 1 is a block diagram illustrating a computer system, including a storage device, that is configured according to an exemplary embodiment of the present invention.

Figure 2 is a block diagram illustrating a computer system, including storage device and master configuration file, that is configured according to an exemplary embodiment of the present invention.

Figure 3 is a block diagram illustrating a computer system configured according to an alternative exemplary embodiment of the present invention.

Figure 4 is a flow chart illustrating a method, according to an exemplary embodiment of the present invention, of inputting user preferences as configuration information to be stored by the computer system.

Figure 5 is a flow chart illustrating a method, according to an exemplary embodiment of the present invention, of inputting network settings for networked and stand alone computers as configuration information to be stored by the computer system.

Figure 6 is a flow chart illustrating a method, according to an exemplary embodiment of the present invention, of inputting electronic mail settings and preferences to be processed and stored by the computer system.

Figure 7 is a flow chart illustrating a method, according to an exemplary embodiment of the present invention, of the operation of the configuration method and the storage of configuration information by the computer system.

Figure 8 is a flow chart illustrating a method, according to an exemplary embodiment of the present invention, of the restoration and back-up of the computer system configuration information upon system failure or information corruption.

DETAILED DESCRIPTION

Figure 1 shows an embodiment of a computer system, 50 which includes a storage device that, in exemplary form, may be a hard drive 52 directly accessible within the computer system. This embodiment is exemplary according to the invention described in pending Patent Application No. 60/151676 for a Method and Apparatus for Configuring a Hard Disk and for Providing Support for a Computer System, filed on August 31, 1999, the contents of which are therefore incorporated herein by reference.

In this exemplary embodiment, hard drive 52 includes four partitions, supported partition, 54, from which a supported environment is implemented, unsupported partition 56 from which an unsupported environment is

implemented, mirror partition 58 and output partition 60. Supported partition 54 includes operating system software 62 and application software 64 supplied with the computer system to a user. User modification of the contents of supported partition 54 may be restricted; in one embodiment by assigning appropriate values to registry 40 stored in supported partition 54.

Alternatively, a policy file 41 for supported partition 54 may also restrict local access to various control panels, and may be used to remove folders and task bars commonly utilized to modify an operating environment.

The invention also contemplates use of a mirror structure, which in this exemplary embodiment is mirror partition 58 which is an exact duplicate of the original and supported content of supported partition 54. As such, it is a persistent copy of supported partition 54, including values contained within registry 40 and policy file 41. Mirror partition is also protected from user modification and can be used to overwrite the supported partition upon corruption or system failure. Output partition 60 stores changing or variable information generated by at least the supported partition 54. This may include output documents 70 of application program 64 of supported partition 54. Output partition 60 also stores configuration data 72 required by the operating system 62 and the application program 64 of the supported environment. That configuration data is maintained as an aggregate in a master configuration file (not pictured) which will be discussed in greater detail hereinafter.

Unsupported partition 56 is not protected from user modification and may be activated by the user to introduce operating systems and applications programs extrinsic from the supported partition 54. In one embodiment, the wizard program and/or the configuration information from master configuration file be used to configure programs and peripherals in the unsupported partition.

The content of output partition 60 may be subject to a backup operation on a periodic basis, or upon the occurrence of a pre-determined event. In one embodiment, the computer system 50 may establish a connection 80 to the Internet 82 (for instance, a dial up connection or digital subscriber line (DSL)

connection or via a networked source) and then upload the content of the output partition 60 to a remote storage facility maintained by a source provider. The content of the output partition, including master configuration file (not pictured), could be uploaded utilizing any one of a number of protocols utilized for communications over Internet 82, such as for example the File Transfer Protocol (FTP) or the Transmission Control Protocol/Internet Protocol (TCP/IC). Remote backup storage may also be available to supported partition 54 and/or unsupported partition 56 by the inclusion of backup storage software which performs scheduled backup operations.

Figure 2 illustrates an exemplary embodiment of the computer system of the invention, where a set-up wizard program 100 is included within output partition 60 to harvest user information necessary to configure various systems, including the machine, network settings and e-mail configuration. This user information is stored within master configuration file 72 retained within output partition 60. In this exemplary embodiment, all user information derived from the operation of set-up wizard 100 is saved within the single master configuration file 72, and may also be saved elsewhere in the system, including the registry 40 of supported partition 54 which may be accessed by set up wizard 100. In the registry, configuration information may be stored in various keys pertaining to the particular system configured. For instance, using the operating environment of the Windows '95 program, available from Microsoft Corporation of Redmond Washington, user information may be stored within the HKEY_USER key while clock settings may be stored within the HKEY_LOCAL_MACHINE key and network settings stored within HKEY_CURRENT_CONFIGURATION.

As configuration information is input by a user executing set up wizard 100, the information is sent to registry 40 of supported partition 54. In its operation, the master configuration file 72 may track and store configuration information forwarded to registry 40 of supported environment 54. Alternatively, master configuration file 72 may store the configuration information directly and may include a registry editor function, allowing

registry 40 to be more easily accessed by a user wishing to input additional or alternative configuration information, which may be done by executing the set-up wizard 100 again. It will be appreciated by those skilled in the art that changes to configuration information may take place elsewhere in the system where they may be located; master configuration file 72 may also store these changes.

The invention further contemplates remote backup of the output partition 60, including master configuration file 72. This involves remote storage 110 of output partition and/or master configuration file 72 to make these available to the user in case of a system failure. The backup can be done upon completion of set up wizard 100, and creation of the master configuration file 72, and may be repeated on a periodic basis or upon the occurrence of a predetermined event. For example, master configuration file 72 could be backed up daily, monthly, or upon detecting shut down of the computer system or a change to any information included in the file. It may also be saved and stored remotely independent of any backup or storage of the remainder of the outlet partition 60.

The structure of the remote storage of master configuration file 72 can vary. For instance, the content of master configuration file 72 may be stored to a further disk drive included within the computer system 50, or to an external storage device (e.g., a floppy drive, ZIP drive or any other removable disk or hard drive device) or via a network to a remote storage facility, for instance through an Internet connection 82.

Where a system fault or failure occurs, in this exemplary embodiment, corrective operation can be performed remotely using support service 92 communicating over a network such as the Internet 82. For instance, support service 92 may establish a network connection to computer system 50 (e.g., a TCP/IP connection via a dial-up or DSL modem) and communicate with a client application program installed on the computer system to remotely take control of operations of computer system 50. Examples of programs which allow a remote user to take control of a computer system include the

NetMeeting application developed by Microsoft Corporation, of Redmond Washington, or the pcAnywhere software developed and sold by Symantec corporation of Cupertino, California.

Having established remote control over computer system 50, remote support provider 92 may then, replace the master configuration file 72 on output partition 60 by overwriting it with the stored contents of this file at the remote storage 110 location. Using the restored master configuration file 72, remote support provider 92 may then obtain access to the registry 40 of supported partition 54 by providing a password known only to the remote support provider 92, and restore configuration information to the registry 40 and the appropriate keys therein. Additionally, the restoration of master configuration file 72 may also send a prompt to the user querying whether any changes to the configuration information are desired. If so, the system may then run the set-up wizard 100, or relevant portions thereof, again and supplement the master configuration file 72 accordingly.

The set up wizard program 100 may be programmed to run automatically upon initial booting of the computer system, for instance when a user receives a new computer system 50 or when an existing system is delivered to a new user. The set-up wizard provides the user interface for the input of configuration information to be used within the computer system. The set up wizard program itself may be created and implemented using language and programming techniques already known to the art. For instance, the programming language used may be C++ and its writing may be assisted by programs such as Visual Studio, or Visual C++, available from the Microsoft, Corporation. Other programming configurations and languages which may be used include Java, Visual Basic, COBOL and others.

Figure 3 illustrates an alternative embodiment of the computer system which does not rely on the activation of fixed and separate partitions each uniformly containing supported or unsupported applications. Computer system 300 features protected execution environment 317 formed from directory paths for supported applications. Virtualization environment 313 is

formed from the directory paths for unsupported applications. No partition distinction between unsupported applications and supported applications 321 are maintained, applications 321 are accessible through the same file system manager 303 within computer system 300. Instead of activating a partition environment, file request 302 placed within the system creates an input/output request 318 placed by the application. Virtualization agent 301, in this embodiment located within file system manager 303, reviews the I/O request to determine if the relevant application governing the particular file is supported or unsupported. If supported, the agent allows the I/O operation to proceed. The I/O activates the requested file against the particular directory in protected execution environment 317. If unsupported, virtualization agent 301 redirects the I/O to the virtualization environment 313 where the I/O request is performed against the virtualization environment 313.

Mirror directory structure 310 mimics the directory structure of the protected execution environment 317, reflecting all executable files for each supported application. In this context, set up wizard 315 is a supported application which may be installed initially in the system and, saving its harvested configuration information to master configuration file 325 accessible through a directory path within protected execution environment 317. Save for its location on the protected execution environment, and the resulting access pathway change, remote storage and backup of master configuration file 325 is otherwise accomplished as with the alternate active partition embodiment of Figure 2, where the master configuration file 325 is stored on the output (or other) partition. A network link to the system, in this embodiment over the internet 340, allows for remote access and backup of the system, including master configuration file 325.

Once run, the set up wizard prompts the user to input information to configure the computer system. This information may include basic information, the input of which, in an exemplary embodiment, may be illustrated using a flow chart, presented as Figure 4. In this embodiment, a welcome screen 400 may appear to the user introducing them to the particular

computer system. Next the user is prompted to input basic user information, illustrated at functional block 410. This information may include all or some of the following, name, phone number, street address, and city/state. Optionally, the user may be prompted at functional block 310 to input an existing identification number previously assigned either upon receipt of the computer system or through use of similar systems.

Information input is saved directly to master configuration file 72 and elsewhere in the system including to registry 40, in the appropriate key, with the entry of this registry information tracked by master configuration file 72. Information in these fields previously within the registry is overwritten by this new input, optionally after set up wizard 100 issues a prompt confirming this new information and warning the user of the overwrite, shown at decision block 320.

In this exemplary embodiment, the user next inputs other basic information such as clock settings showing local time, time zone and date at functional block 330. Again, this may be saved to the appropriate location in registry 40, with this information either tracked by master configuration file 72 or directly saved by this file 72 and, optionally, the user may be warned 440 of any overwrite of existing information in registry 40.

Figure 5 illustrates a flow chart of the operation of the set-up wizard with respect to network access settings. In this exemplary embodiment, initially the user is prompted at decision block 500 to indicate whether the system is a stand-alone (*e.g.*, dial-up access to network such as Internet) or a networked system. Selection of a stand alone system in this embodiment displays a telephony control panel 505. Using this panel, the user can configure dial-up options including the choice of an Internet service provider. This information is also saved within the master configuration file 72, either by tracking or directly. A further wizard program 515 to set up network access information may then be run to configure the gateway. This information may also be saved in the master configuration file. Next the stand alone user may be prompted to input the asset numbers 525 of the hardware which makes up

the system, *e.g.*, serial numbers or other asset designations, and other items. This registers 535 the user for warranty and other support and maintenance purposes. Registration information is saved again to the master configuration file 72.

For the networked user, in an exemplary embodiment, at functional block 510 the user is directed to launch a network control panel. Using the control panel, the user configures the network and provides network information. The inputs are saved to the master configuration file 72. If the user was mistaken, and has a stand alone system, or conversely if a network user incorrectly selected a stand alone configuration option, the user can return to the other option at decision block 517, *e.g.*, by pressing the cancel icon on the screen. After configuration of the network and providing the network settings, at functional block 520, the system reboots and the set up wizard program restarts 530 by requesting proxy server information at decision block 540. If the user has no proxy server, at functional block 550 the user is connected with a registration web page for a suitable proxy server, *e.g.*, by launching a web browser program such as Internet Explorer, available from Microsoft Corporation of Redmond, Washington. At that stage, the user may register with a proxy server, the server identity and information being conveyed and stored on master configuration file 72.

If the user already uses a proxy server, a settings screen is displayed at functional block 560. Using the settings screen, the user can configure an Internet control panel as well as connections tab and provide Local Area Network settings, if applicable. Other configurations may be set at this stage including connected options, connections and firewall tab. Again, setting information and configurations are saved to the master configuration file by direct storage or tracking values sent to registry 40.

Figure 6 illustrates a flow chart diagram of the set up wizard function in an exemplary embodiment to configure electronic mail information of the user. At decision block 600, the user selects a user name and/or electronic mail (*e-mail*) name. Upon input, the set up wizard checks the availability of the name

at decision block 510 against the e-mail database for the system for any conflicting names.

If the name is not available, the user is informed of this at functional block 620. At this point the user may be asked to select another name, or alternatively a name may be assigned or a list of available names corresponding to the initial request may be suggested for selection. Once a name is selected and available, the name is stored within the master configuration file and reflected within the registry.

At this stage, at functional block 630, the set up wizard may request a user password to access the electronic mail server used by the system. For networked users this is likely already determined by the network, for stand alone users it may be an adjunct of the selection of an Internet service provider. The type of system, *i.e.*, stand alone or network, may then dictate the particular password to be used. At functional block 640 the e-mail server is accessed and configured. Alternatively, at this step, outsourcing accounts for electronic commerce or other Internet support may be configured and set up, for instance with such companies as Concentric Network Corporation, of San Jose, California, and Critical Path Corporation of San Francisco, California. The configuration information for each of these access points, including access numbers, if any, are then saved within the master configuration file.

Figure 7 illustrates a further flow chart summarizing the configuration of one exemplary embodiment of the system using the set up wizard. After the system is first provided to the user 700, the set up wizard harvests configuration information from the user, 710. This information is saved to the master configuration file (MCF) which is created 720. The manner of this saving may be done in ways which would occur to one skilled in the art and may be done incrementally as the information is input or may be saved as an aggregate at the end of the set up wizard session.

The information saved is then used to configure 730 the local system 50 of the user, incorporating the relevant values within registry 40 of the supported partition 54 reproduced as well within the mirror partition 740.

Remote back up 750 of the master configuration file is then accomplished, in an exemplary embodiment by a network connection established over the Internet 760 to a remote storage location. The remote storage location may be a data storage facility having the storage capacity and specialized software to backup and restore system information. Computer system 50 may be configured to automatically establish dial-up connections to a support facility on a periodic basis, and to back the contents of the master configuration file 72 and output partition 60 to storage facilities. In a further embodiment, the computer system 50 may have a permanent connection to the network, for example the Internet via a DSL or ISDN connection, and remote backup software may be configured periodically to perform backup to storage facilities provided by a supported service.

Figure 8 illustrates a flow chart summarizing the operations of an exemplary embodiment of the invention should configuration information be lost within the system. This may result from a corruption of registry 40 or other system failure. At functional block 800 a situation arises where the configurations are lost on the system 50. Initially, either internally or remotely the system can determine if the master configuration file survives 810. If it survives, the MCF can be used to overwrite 815 the lost configuration information, in one embodiment, by passing the necessary values to registry 40 of the supported partition 54. If the MCF is not intact, the system can determine if the persistent copy at mirror partition or mirror directory, is intact at decision block 820. If so, the persistent copy containing registry information can overwrite 825 the registry 40. If the mirror partition is not intact, through remote control of the computer system the stored remote copy of the master configuration file can be passed over a network to the computer system 830 to overwrite 835 both the corrupted local master configuration file and other corrupted information, including the registry information 40. Thus restoring configuration information.

Alternatively, either upon system failure or other malfunction or, optionally, at the request of the user, the set up wizard may be executed again

to update or change configuration information. Thus, in one exemplary embodiment, the set up wizard remains accessible on the system control panel for use by the user. Policy section 41 may be configured to allow this indirect access to the registry information, which would otherwise be inaccessible to the user in an exemplary embodiment.

In the preceding detailed description, the invention is described with reference to specific embodiments thereof. It will, however, be evident that various modifications and changes may be made thereto without departing from the broader spirit and scope of the invention as set forth in the claims. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

CLAIMS

What is claimed is:

1. A method comprising:
receiving configuration information into a master configuration file located within a computer system;
receiving configuration information at a storage location from the computer system, the storage location being remote from the computer system and coupled to the computer system via a network; and
responsive to a trigger event, supplying configuration information from the storage location to the computer system via the network so as to enable the computer system to be configured in accordance therewith.
2. The method of claim 1 further comprising:
storing the configuration information within a first registry located within a first partition of the computer system, the first partition configured to support a first environment of the computer system; and,
storing the configuration information within a second registry located within a second partition of the computer system, the second partition comprising a persistent copy of the contents of the first partition.
3. The method of claim 1, further wherein the master configuration file is locatable within a protected execution environment; and,
storing the configuration information within a file locatable within a mirror directory structure, the mirror directory structure comprising a persistent copy of the protected execution environment.
4. The method of claim 3, wherein the master configuration file further comprises:

a registry editor connected to the first partition first registry and the method further comprises receiving changes to configuration information into the registry editor; and,

communicating the changes to the first partition first registry.

5. The method of claim 1, wherein the master configuration file is stored to a local hard disk arrangement of the computer system.

6. The method of claim 1, wherein the remote storage location comprises a hard disk arrangement accessible by the computer system by a network connection.

7. The method of claim 6, wherein the network connection is the Internet.

8. The method of claim 1, wherein the configuration information comprises user name, user contact information, date, time and time zone.

9. The method of claim 1, wherein the configuration information comprises network settings for a network connection accessible by the computer system.

10. The method of claim 9, wherein the computer system is networked and the method further comprises receiving proxy server settings from a user.

11. The method of claim 9, wherein the computer system comprises a stand-alone computer and the method further comprises receiving user preferences for network access.

12. The method of claim 9, wherein the configuration information comprises a hardware asset number and the method further comprises receiving the asset number from a user and using this number to register the computer system at the remote data storage location.

13. The method of claim 11, wherein receiving user preferences includes receiving a selection for an Internet service provider from a user.

14. The method of claim 2, wherein the computer system comprises a third partition supporting an operating environment accessible by the user containing the master configuration file and the step of receiving further comprises executing a computer program defined within the third partition configured to receive configuration information and store the information to the master configuration file.

15. The method of claim 14 wherein the computer system comprises a fourth partition supporting an operating environment on which extrinsic peripherals and extrinsic software operate and the step of configuring further comprises configuring the peripherals and software according to user preferences.

16. The method of claim 1, further comprising:
receiving an electronic mail address from a user;
determining if the address is available; and,
where the address is available, creating an electronic mail account for the user.

17. The method of claim 16, further comprising configuring electronic mail settings of the computer system according to the configuration information received.

18. The method of claim 1, wherein the configuration information comprises settings for an electronic mail system used by the computer system.

19. A computer system, comprising:
a storage device;
a user interface connected to the storage device;
a registry defined within the storage device to receive configuration information;
a mirror structure defined within the storage device comprising a persistent copy of the registry; and,
a master configuration file defined within the storage device to receive configuration information.

20. The computer system of claim 19, wherein the storage device is a first storage device and the computer system further comprises:
a second storage device configured to receive configuration information from at least one of the registry of the first storage device and the master configuration file of the first storage device; and,
a network connection coupling the second storage device to the first storage device.

21. The computer system of claim 20 wherein the configuration information may be accessed and modified by a user.

22. The computer system of claim 19, further comprising a computer program connected to the user interface executable to receiving configuration information from a user.

23. The computer system of claim 22, wherein the computer program configures the registry according to the configuration information received.

24. The computer system of claim 22, wherein the configuration information received by the computer program is stored to the master configuration file.

25. The computer system of claim 19, wherein the storage device is a local hard disk arrangement.

26. The computer system of claim 20, wherein the second storage device is a remote hard disk arrangement accessible over a network.

27. A method of user configuration of a computer system comprising:

inputting user configuration information into a computer interface connected to a local storage device;

sending the user personal information and network configuration information, to be used to configure the computer system, to be saved within a master configuration file at the local storage device; and,

sending the user personal information and the network configuration information to be saved at a remote storage device.

28. The method of claim 27, wherein the inputting of the user configuration information further comprises selecting an Internet service provider.

29. The method of claim 27, wherein the inputting of the user configuration information further comprises inputting proxy server settings.

30. The method of claim 27, wherein the inputting of the user configuration information further comprises:

selecting an electronic mail address;

sending the address to be searched for availability; and,

receiving a notice that the address is available to the user.

31. A method comprising:

receiving electronic mail configuration information from a user interface into a computer system configured to support electronic mail connections; storing the electronic mail configuration information to a master configuration file located within the computer system; storing a copy of the master configuration file to a data storage device at a location remote from the computer system; and, configuring the electronic mail connections of the computer system according to the electronic mail configuration information provided by the user.

32. The method of claim 31, wherein the receiving of the electronic mail configuration information further comprises receiving a proposed electronic mail address from a user;

determining if the address is available; and,

where the address is available, creating an electronic mail account for the user with an electronic mail server.

33. The method of claim 32, wherein the determining further comprises:

sending the proposed electronic mail address to an electronic mail server; and,

performing a search for the proposed electronic mail address on the server.

34. The method of claim 32, wherein the step of determining further comprises:

checking the proposed electronic mail address for a match with other electronic mail addresses contained within an electronic mail database defined within the computer system.

35. The method of claim 31, further comprising:

storing the electronic mail configuration information within a first registry located within a first partition of the computer system, the first partition configured to support a first environment of the computer system; and,

storing the electronic mail configuration information within a second registry located within a second partition of the computer system, the second partition comprising a persistent copy of the contents of the first partition.

36. The method of claim 31, wherein the receiving comprises: providing query prompts to a user through a user interface.

37. The method of claim 31, wherein the master configuration file further comprises a registry editor connected to the first partition first registry and the method further comprises receiving changes to electronic mail configuration information into the registry editor; and, communicating the changes to the first partition first registry.

38. The method of claim 31, wherein the configuration information is stored to a local hard disk arrangement of the computer system.

39. The method of claim 31, wherein the remote data storage device is a remote hard disk arrangement accessible by the computer system by a network connection.

40. The method of claim 39, wherein the network connection is the Internet.

41. A method of providing support for a computer system configuration information, the method including:
- providing a remote data storage location wherein configuration information is stored;
 - establishing a network communication connection between the computer system and the remote data storage location; and,
 - supplying configuration information to the computer system over the network communication connection.
42. The method of claim 41, further comprising:
- conducting diagnostic checks on the computer system to determine the integrity of configuration information stored therein.
43. The method of claim 42, wherein the diagnostic checks are conducted from the remote data storage location.
44. The method of claim 41, further comprising:
- detecting corruption of configuration information within a computer system; and,
 - overwriting the configuration information using data from a master configuration file.
45. The method of claim 41, wherein the computer system comprises a local storage device comprising a master configuration file.
46. The method of claim 41, wherein a master configuration file is located within a storage device remote from the computer system and the method further comprises:
- accessing the computer system through a network connection;

sending data from the master configuration file to the computer system over the network connection; and,
overwriting the configuration information using data from the master configuration file.

47. A machine-readable medium that provides instructions, which when executed by a set of processors, cause said set of processors to perform operations comprising:

receiving configuration information at a storage location from a computer system, the storage location being remote from the computer system and coupled to the computer system via a network; and,

responsive to a trigger event, supplying configuration information from the storage location to the computer system via the network so as to enable the computer system to be configured in accordance therewith.

48. The medium of claim 47, further comprising the operations of:
conducting diagnostic checks on the computer system to determine the integrity of configuration information stored therein.

49. The medium of claim 47, further comprising the operations of:
detecting corruption of configuration information within a computer system; and,
overwriting the configuration information using data from a master configuration file.

50. The medium of claim 47, further comprising the operations of:
accessing the computer system through a network connection; and,
sending data from the master configuration file to the computer system over the network connection.

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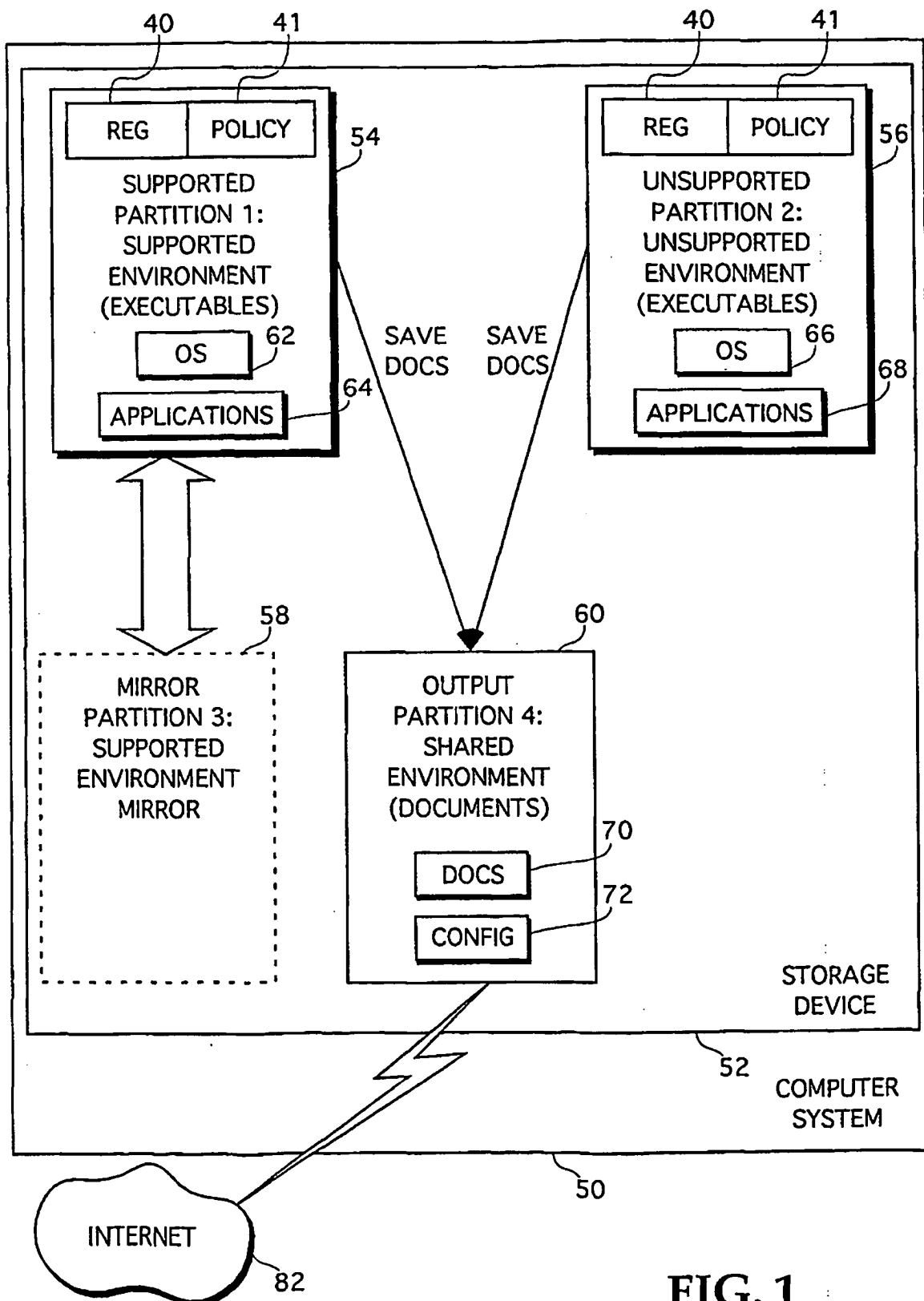


FIG. 1

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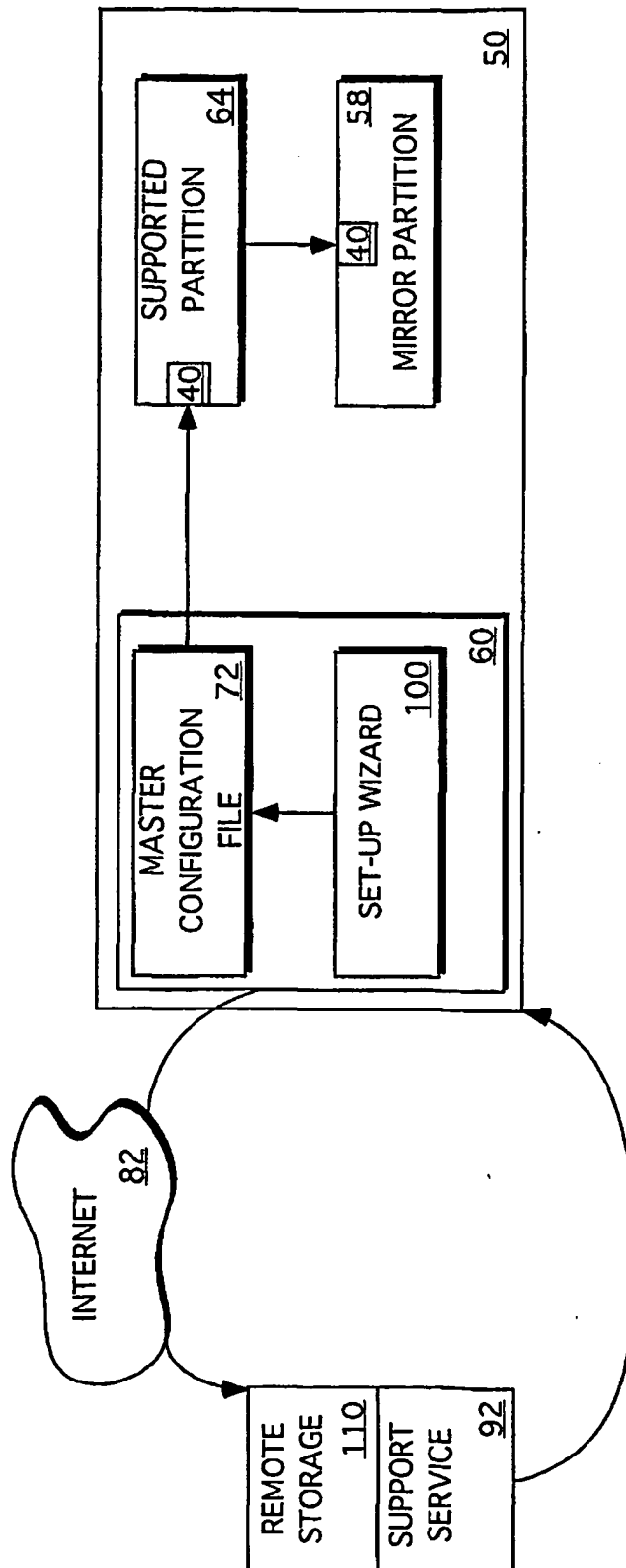


FIG. 2

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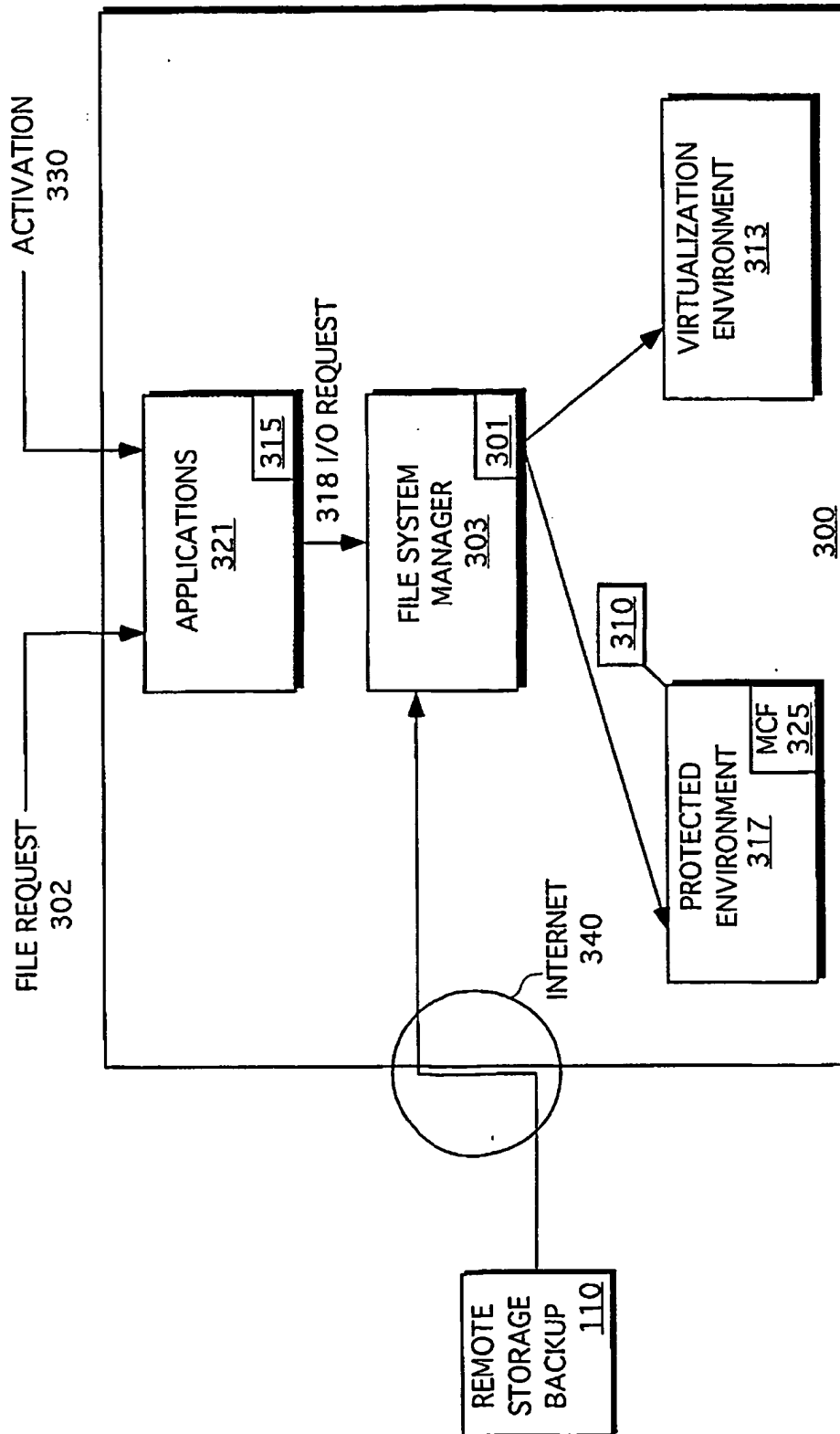


FIG. 3

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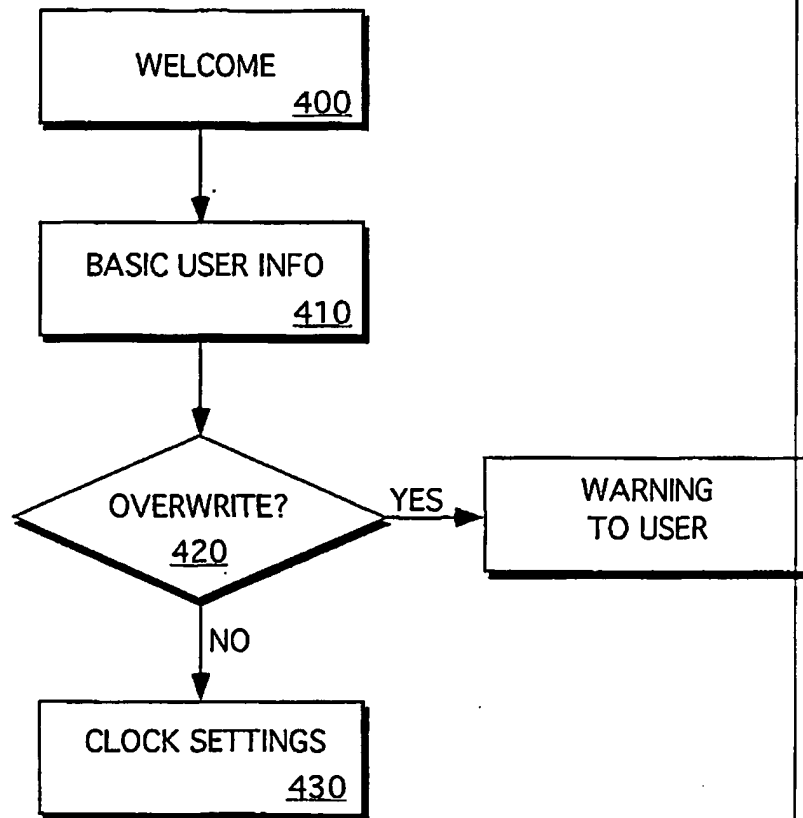


FIG. 4

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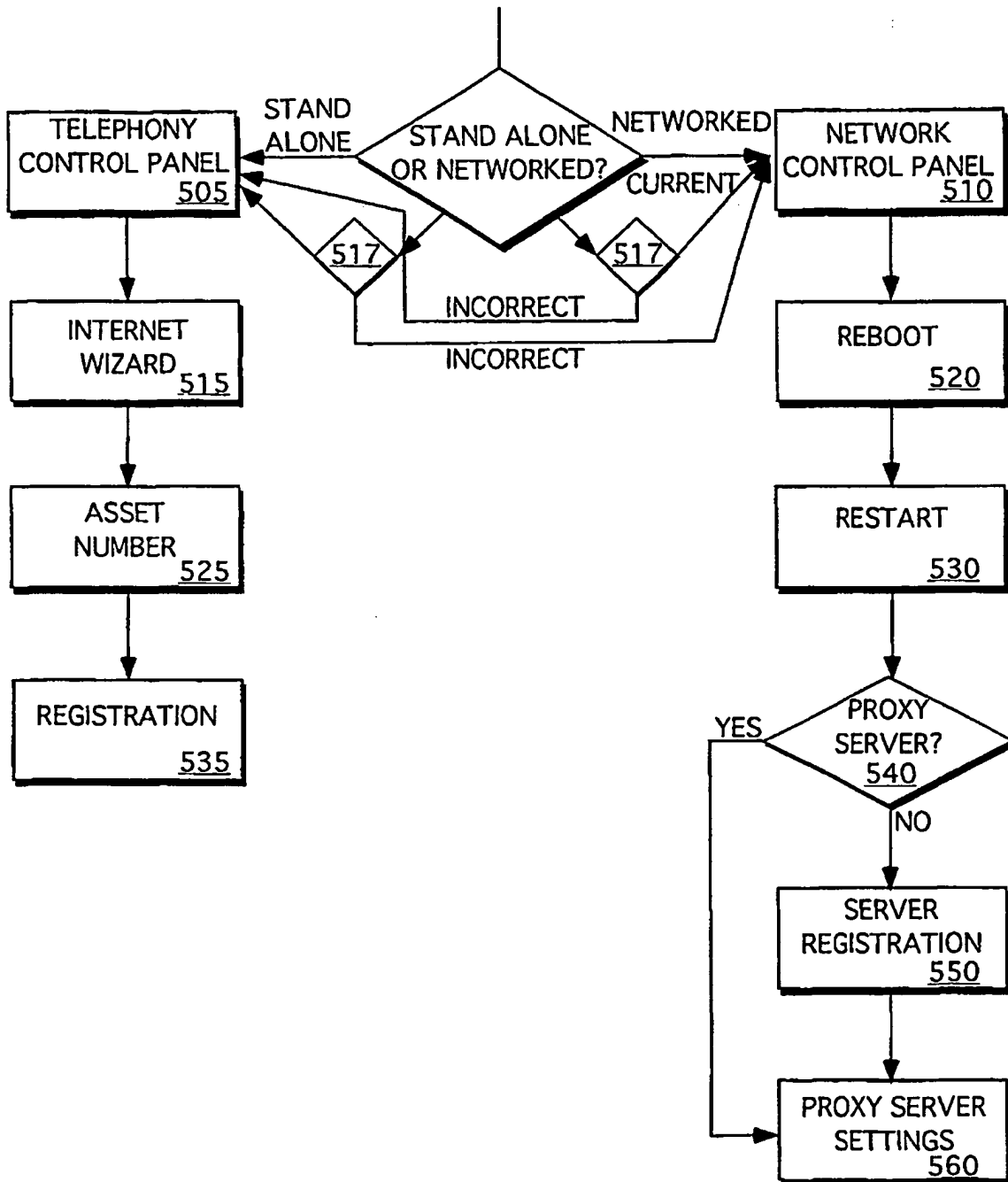


FIG. 5

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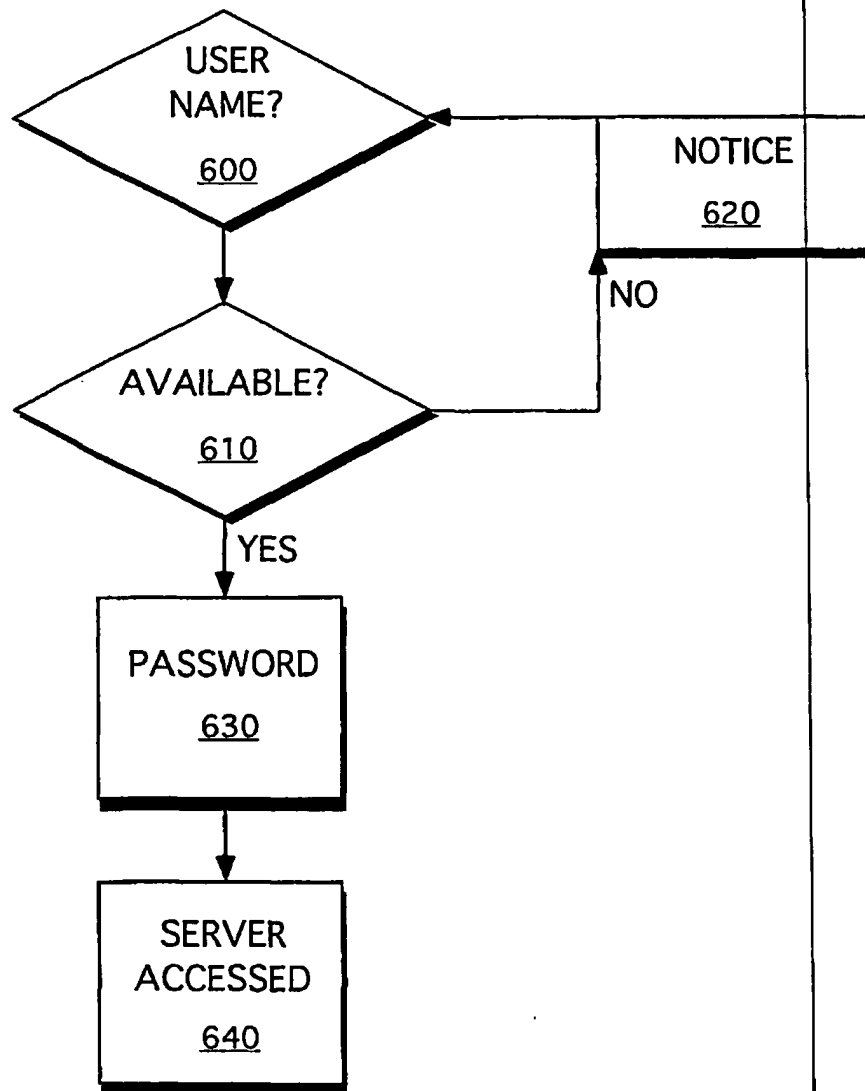


FIG. 6

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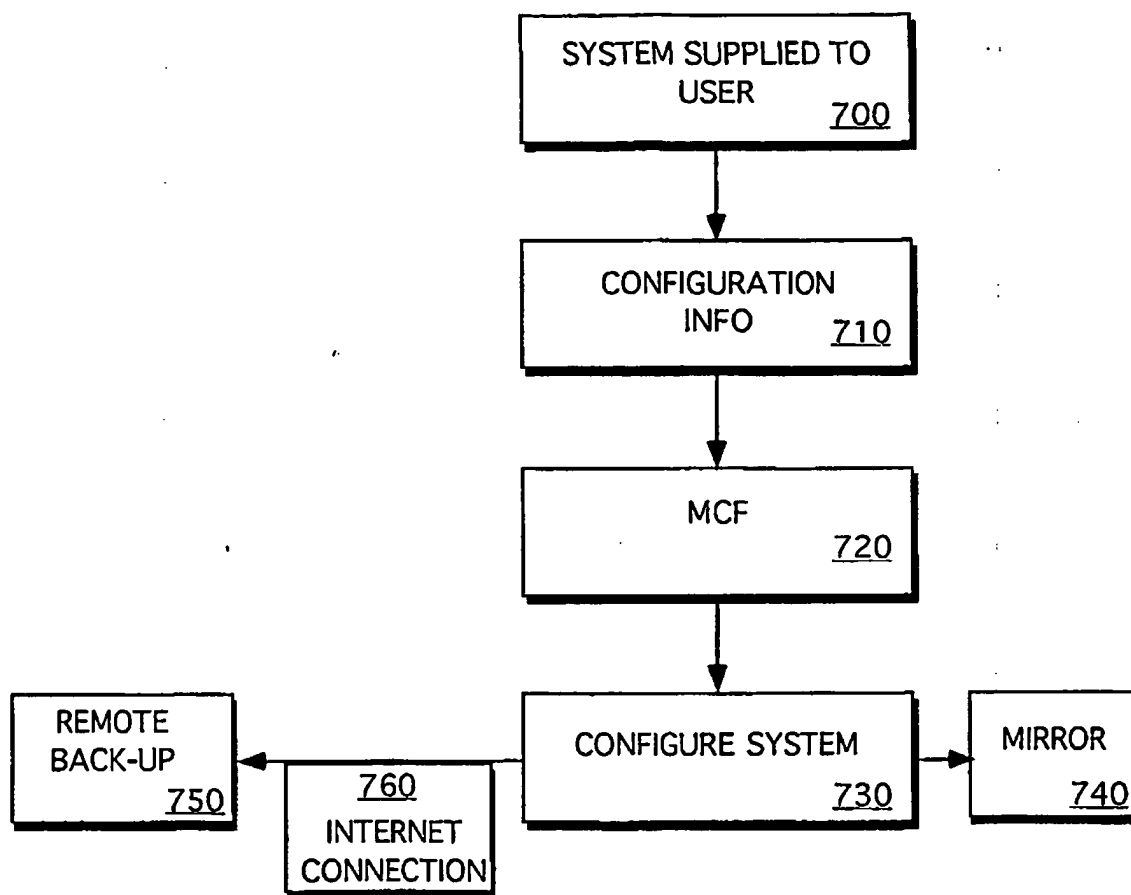


FIG. 7

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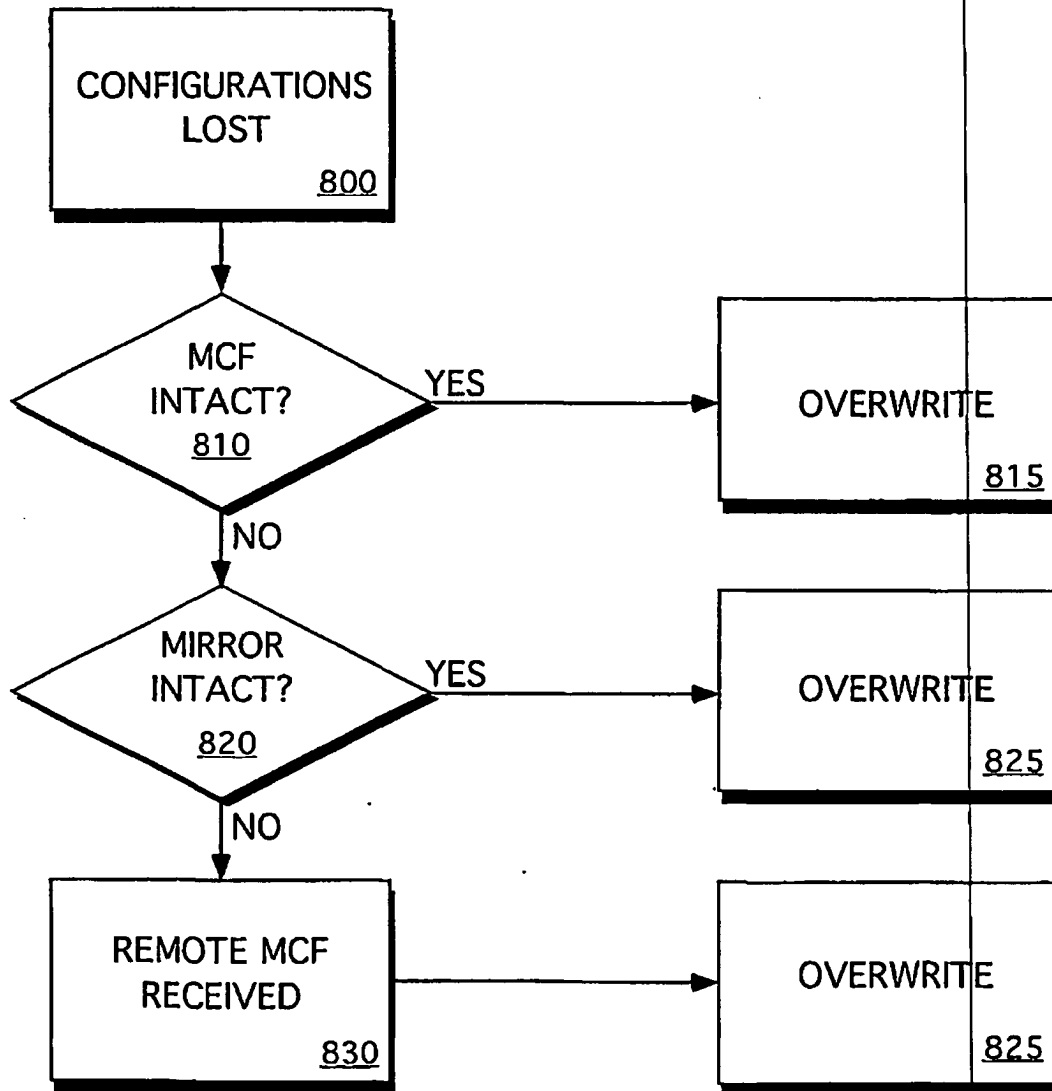


FIG. 8

INTERNATIONAL SEARCH REPORT

International application No.
PCT/USD1/04604**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : G06F 15/177

US CL : 709/220, 221; 707/200; 713/100; 395/651

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 709/220, 221; 707/200; 713/100; 395/651

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

East search terms: remote storage location, trigger event, storage device and master configuration file, remote storage location and configuration information.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 6,098,098 A (SANDAHN et al.) 01 August 2000, abstract, figs. 1, 2, 3, col. 2 lines 26-col. 3 lines 46, col. 5 lines 17-36, col. 8 lines 10-44.	1-50
Y,P	US 6,185,574 B1 (HOWARD et al.) 06 February 2001, abstract, figs. 2, 3, col. 4 lines 7-col. 5 lines 22,	1-50
Y	US 5,758,154 A (QURESHI) 26 May 1998, abstract, col. 3 lines 26-46.	1-50

☐ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

02 APRIL 2001

Date of mailing of the international search report

27 APR 2001

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